



## INTERNATIONAL SEARCH REPORT

 International application No.  
PCT/KR2003/002116

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> <b>IPC7 H02J 7/00</b> According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC7 H02J, H01M Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched KR: IPC as above Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	KR 2001-0048695 A(GUNG-DUCK JANG) 15 JUN. 2001	1 - 4
A	KR 2001-0074181 A( INGKA SYSTEMS CO., LTD.) 4 AUG. 2001	1, 2
A	KR 2001-0109964 A(BO-HYONG CHO) 12 DEC. 2001	1
A	JP 1997-223520 A(SONY CO., LTD) 26 AUG. 1997	1
A	JP 1999-40208 A(SANYO ELECTRIC CO., LTD.) 12 FEB. 1999	1
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input checked="" type="checkbox"/> See patent family annex.		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 12 JANUARY 2004 (12.01.2004)		Date of mailing of the international search report 15 JANUARY 2004 (15.01.2004)
Name and mailing address of the ISA/KR  Korean Intellectual Property Office 920 Dunsan-dong, Seo-gu, Daejeon 302-701, Republic of Korea Facsimile No. 82-42-472-7140		Authorized officer JEON, Yong Hai Telephone No. 82-42-481-5657 

**INTERNATIONAL SEARCH REPORT**

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
KR 2001-0048695 A	15 JUN. 2001	NONE	
KR 2001-0074181 A	4 AUG. 2001	NONE	
KR 2001-0109964 A	12 DEC. 2001	NONE	
JP 1997-223520 A	26 AUG. 1997	NONE	
JP 1999-40208 A	12 FEB. 1999	NONE	